

IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF TENNESSEE  
NORTHEASTERN DIVISION

SHIRLEY JOHNSON, as Legal Guardian	)	
of Michael Gilfeather, an incapacitated	)	
adult,	)	
	)	
Plaintiff	)	
	)	
and	)	
	)	
OAK RIVER INSURANCE COMPANY,	)	
	)	
Intervening Plaintiff	)	No. 2-02-0080
	)	
v.	)	
	)	
MANITOWOC BOOM TRUCKS, INC.	)	
and NATIONAL EQUIPMENT	)	
SERVICES, INC., <sup>1</sup>	)	
	)	
Defendants	)	

**MEMORANDUM**

Pursuant to the provisions of 28 U.S.C. § 636 and Rule 73(b) of the Federal Rules of Civil Procedure, the parties in this action have consented to have the Magistrate Judge conduct any and all further proceedings in the action and the action has been referred to the Magistrate Judge for all further proceedings, including entry of final judgment. See Order entered January 3, 2005 (Docket Entry No. 64).

Pending before the Court is the Motion to Exclude Testimony of Gary Friend and for Summary Judgment filed by the defendant, Manitowoc Boom Trucks, Inc. (Docket Entry No. 86),

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<sup>1</sup>National Equipment Services, Inc. was dismissed from this case by order entered November 8, 2004 (Docket Entry No. 60).

to which the plaintiff, Shirley Johnson, filed a response (Docket Entry No. 107), and the defendant has replied (Docket Entry No. 123). The Court heard oral argument on this motion, as well as the Defendant's Motion to Strike (Docket Entry No. 125) and the plaintiff's Motion for Partial Summary Judgment (Docket Entry No. 96) on October 25, 2005. For the reasons discussed herein, the defendant's motion for Summary Judgment is GRANTED.

### **FACTUAL BACKGROUND AND PROCEDURAL HISTORY**

In October 2001, Michael Gilfeather was working as an employee of American Shotcrete near Cookeville, Tennessee.<sup>2</sup> The employees of American Shotcrete were using a boom truck crane manufactured by Manitowoc. A boom truck crane is a crane mounted on a truck which can be transported to work sites. The Manitowoc crane was designed to be operated with two front "outriggers" and two rear "stabilizers" extended and touching the ground.<sup>3</sup> The outriggers and stabilizers stabilize the truck when the crane boom is moved or extended and prevent the crane from turning over.

On October 15, 2001, Michael Gilfeather was working for American Shotcrete at the Cookeville construction site, along with other American Shotcrete employees, including Delayne Williams and his father, Bruce Williams. Mr. Gilfeather was American Shotcrete's Safety Director

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<sup>2</sup>Unless otherwise noted, the facts have been drawn from the Plaintiff's Response to Defendant Manitowoc's Statement of Undisputed Facts (Docket Entry No. 109), Deposition of Kenneth Delayne Williams (Docket Entry No. 93), Deposition of Bruce Williams (Docket Entry No. 94), Deposition of Gary Friend (Docket Entry No. 91), Plaintiff's Response to Defendant Manitowoc's Statement of Undisputed Facts (Docket Entry No. 109), and Defendant's Response to Plaintiff's Concise Statement of Additional Material Facts (Docket Entry No. 124).

<sup>3</sup>The terms "outriggers" and "stabilizers" are sometimes used interchangeably, and are hereinafter referred to collectively as outriggers.

on the site. Delayne Williams operated the Manitowoc crane that day. Delayne Williams has his Commercial Driver's License and is an experienced heavy equipment operator, but he had never operated a boom truck crane before working at that job site on that day, and never read the owner's manual or the safety manual for the Manitowoc crane. However, he knew that the crane could tip over if it were moved without all four outriggers extended.

On the date in question, Delayne Williams finished using the Manitowoc crane and attempted to move a Chevrolet Suburban past the boom truck crane so he could leave the job site. At the suggestion of Mr. Gilfeather, Delayne Williams retracted the front, passenger-side outrigger on the Manitowoc crane so that he could drive his vehicle past the boom truck crane.<sup>4</sup> While Delayne Williams was moving the truck, Bruce Williams attempted to use the boom truck crane to move some heavy materials. With the outrigger still partially retracted, Bruce Williams began to move the boom on the crane, and the boom truck crane fell over, injuring Mr. Gilfeather.

Mr. Gilfeather, through Shirley Johnson as legal guardian, brought the present case against Manitowoc, alleging the crane was defective and/or unreasonably dangerous, both because of an unsafe design and an inadequate warning. The plaintiff has presented one expert witness, Gary Friend, a mechanical engineer. Mr. Friend is a self-employed mechanical engineer whose consulting practice consists exclusively of working on lawsuits or potential lawsuits.

Mr. Friend's proposed expert opinion is that the Manitowoc crane should have an "outrigger - boom interlock system" ("interlock system") that operates by preventing operation of the crane unless the outriggers are firmly extended on terrain. Mr. Friend opines that an interlock system

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<sup>4</sup>Delayne Williams had some trouble remembering the exact circumstances of the incident, but in his deposition he testified that he was "positive" that it was the front, passenger side outrigger that he retracted, and that he only partially retracted this outrigger. (Docket Entry No. 93-3 at 5-6)

could be incorporated into the crane's existing electrical and hydraulic system, based primarily on a similar system on a 1978 Asplundh boom truck. As illustration of his alternative design, Mr. Friend created a schematic drawing consisting of juxtaposed schematics of the hydraulic and electrical systems of the Manitowoc truck and the Asplundh truck, purporting to show how the Asplundh interlock system could be linked up to the existing Manitowoc systems. (Exhibit 12, Docket Entry No. 92-18) Mr. Friend further testified that if an interlock system had been installed, properly maintained, working properly and not overridden, the misuse that caused this accident might not have occurred.

## **LEGAL STANDARD**

### **1. Summary Judgment Standard**

Federal Rule of Civil Procedure 56(c) provides that summary judgment shall be granted if “the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law.” Fed. R. Civ. P. 56(c). To prevail, the moving party must meet the burden of proving the absence of a genuine issue of material fact as to an essential element of the opposing party's claim. See Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986); Logan v. Denny's, Inc., 259 F.3d 558, 566 (6th Cir. 2001).

In determining whether the moving party has met its burden, the Court must view the factual evidence and draw all reasonable inferences in the light most favorable to the nonmoving party. See Matsushita Electric Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 (1986); McLean v. 988011 Ontario, Ltd., 224 F.3d 797, 800 (6th Cir. 2000). “The court's function is not to weigh the evidence

and determine the truth of the matters asserted, ‘but to determine whether there is a genuine issue for trial.’” Little Caesar Enters., Inc. v. OPPCO, LLC, 219 F.3d 547, 551 (6th Cir. 2000) (quoting Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 (1986)).

If the nonmoving party fails to make a sufficient showing on an essential element of the case with respect to which she has the burden, however, the moving party is entitled to summary judgment as a matter of law. See Williams v. Ford Motor Co., 187 F.3d 533, 537-38 (6th Cir. 1999). To preclude summary judgment, the nonmoving party “must go beyond the pleadings and come forward with specific facts to demonstrate that there is a genuine issue for trial.” Chao v. Hall Holding Co., Inc., 285 F.3d 415, 424 (6th Cir. 2002). “The mere existence of a scintilla of evidence in support of the [nonmoving party’s] position will be insufficient; there must be evidence on which the jury could reasonably find for the [nonmoving party].” Shah v. Racetrac Petroleum Co., 338 F.3d 557, 566 (6th Cir. 2003) (quoting Anderson, 477 U.S. at 252). If the evidence offered by the nonmoving party is “merely colorable,” or “not significantly probative,” or not enough to lead a fair-minded jury to find for the nonmoving party, the motion for summary judgment should be granted. Anderson, 477 U.S. at 249-52. “A genuine dispute between the parties on an issue of material fact must exist to render summary judgment inappropriate.” Hill v. White, 190 F.3d 427, 430 (6th Cir. 1999) (citing Anderson, 477 U.S. at 247-49). With this standard in mind, the Court turns to an analysis of the claims presented in this case.

## **2. Tennessee Products Liability Law**

Tennessee products liability law governs this diversity case. See Erie R.R. Co. v. Tompkins, 304 U.S. 64, 58 S. Ct. 817, 82 L. Ed. 1188 (1938). In Tennessee:

[a] manufacturer or seller of a product shall not be liable for any injury to a person or property caused by the product unless the product is determined to be in a defective condition or unreasonably dangerous at the time it left the control of the manufacturer or seller.

Tenn. Code Ann. § 29-28-105(a). A plaintiff must show that a product is either defective or unreasonably dangerous for liability to be imposed under § 29-28-105(a). See Roysdon v R.J. Reynolds Tobacco Co., 849 F.2d 230, 235 (6th Cir. 1988). In this context, there are two tests for determining whether a product is “unreasonably dangerous.” A product is unreasonably dangerous if it is more dangerous than would be contemplated by an ordinary consumer (the “consumer expectation test”), or if the product is so dangerous it would not be put on the market by a reasonably prudent manufacturer (the “prudent manufacturer test”). Tenn. Code Ann. § 29-28-102(8). See Coffey v. Dowley Mfg. Co., 187 F. Supp. 2d 958, 968 (M.D. Tenn. 2002), aff’d 89 F. App’x 927 (6th Cir. 2003) (describing the two tests under Tennessee law). Under Tennessee law, the two tests are distinct, have different elements, require different forms of proof, and are neither mutually exclusive nor mutually inclusive. Ray v. BIC Corp., 925 S.W.2d 527, 531 (Tenn. 1996).

The prudent manufacturer test is the appropriate standard in this litigation.<sup>5</sup> The prudent manufacturer test requires the evaluation of a number of factors, drawn from the writings of Deans Wade, Prosser and Keeton, including: the safety aspects of the product, the likelihood or probable seriousness of an injury, the manufacturer’s ability to eliminate the unsafe character of the product without impairing the product’s utility or making it too expensive, the user’s ability to avoid danger

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<sup>5</sup>The consumer expectation test applies only to products in which the everyday experience of ordinary consumers can fairly be employed. Ray v. BIC Corp., 925 S.W.2d 527, 531 (Tenn. 1996). In a claim involving a more complex product, such as the present case, the prudent manufacturer test is the appropriate test to determine whether the product is unreasonably dangerous or defective.

by exercise of care, the user's awareness of the danger inherent in the product, and the feasibility of spreading the loss. See Ray, 925 S.W.2d at 533 (discussing and synthesizing the works of Prosser, Keeton and Wade); Davis v. Komatsu, 46 F. Supp. 2d 745, 751 (W.D. Tenn. 1999), rev'd in part on other grounds 19 F. App'x 253 (6th Cir. 2001). Tennessee courts have construed the prudent manufacturer test as requiring a "risk-utility balancing of factors, including those factors identified as part of the Wade-Keeton manufacturer test." Ray, at 533. See also King v. Danek Med., 37 S.W.3d 429, 436 (Tenn. Ct. App. 2000) (addressing risk-utility analysis).

Expert testimony is essential in evaluating a product under the prudent manufacturer test. Ray, at 531. See also Pride v. BIC Corp., 218 F.3d 566, 580 (6th Cir. 2000) (Tennessee law requires expert testimony in cases alleging manufacturing and design defects); Coffey, 187 F. Supp. 2d at 972 (Tennessee courts have generally required expert testimony in cases involving both complex products and complex failures of simple products); Whaley v. Rheem Mfg. Co., 900 S.W.2d 296, 301 (Tenn. Ct. App. 1995) (expert testimony required when workings of a product "are beyond the common knowledge of laymen"). The Court and the parties agree that the prudent manufacturer test applies, and that the appropriate design of a boom truck crane and the safety features of such a crane are not within the "common knowledge of laymen." Therefore, in order to proceed, the plaintiff in this case must offer competent and admissible expert testimony establishing that the design of the Manitowoc boom truck crane was defective or unreasonably dangerous.

The defendants have moved to exclude the opinions of the plaintiff's expert, Gary Friend. Exclusion of the opinions of the plaintiff's only proffered expert will mandate summary judgment

in the defendant's favor.<sup>6</sup> The admissibility of Mr. Friend's testimony under the Federal Rules of Evidence is the central issue with respect to all pending motions in this case.

### The Plaintiff's Expert

The plaintiff has identified Gary Friend as an expert to testify about the allegedly unreasonably dangerous condition of the defendant's boom truck crane and the alleged inadequacy of the warnings provided. Mr. Friend received a bachelor's degree in mechanical engineering in 1964 and a master's degree in mechanical engineering in 1969. Mr. Friend is a registered professional engineer in the states of Illinois and Missouri. He taught engineering for ten years (five years were part time) at Maple Woods Community College in Kansas City, Missouri. For the past 25 years, Mr. Friend has been self-employed as a "consultant," performing engineering analyses in relation to testifying as an expert in lawsuits.

Mr. Friend has testified as an expert in a wide range of design defect cases. He has found design defects in products including a wheelchair, a deep fat fryer, a passenger elevator, an antique replica shotgun, a hay baler, a meat tenderizer, a forklift, a manure spreader, a lawn mower, a seat belt assembly, a log skidder, a concrete saw, a trampoline, and a tree stand. (Friend Depo. p. 257-71, Docket Entry No. 111-6 at 27) Mr. Friend testified that he was qualified to render an opinion on the design of "almost any machine," as long as he felt comfortable with that machine. (*Id.* at 204) The only areas about which Mr. Friend feels unqualified to testify are airplanes, bridge design, and nuclear power plant design. (*Id.* at 205-06) After being retained by plaintiff's counsel, Mr. Friend

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<sup>6</sup>The plaintiff also argues that David Moravec, a defense witness, can provide the requisite expert testimony in the event Mr. Friend's testimony is disallowed. See infra p. 23-24.



reviewed the design of the Manitowoc boom truck crane to determine if any safety devices could have prevented the plaintiff's accident. (Friend Amended Narrative Report p. 1, Docket Entry No. 112 at 1) In preparing his expert report, Mr. Friend read various depositions, owners' and operators' manuals, and discovery responses. Id. at 3. He also reviewed brochures for the Manitowoc boom truck crane, Asplundh boom truck, and "various industry brochures." Id. Mr. Friend read the statements of persons in the area of the accident, the TOSHA report with accompanying photos, and personally inspected and photographed the subject truck crane. Id.

Mr. Friend offers two opinions in this case. First, he claims that the Manitowoc crane involved in this incident lacked a critical safety design feature in the form of an interlock system, rendering the crane defective and unreasonably dangerous. Id. at 9. Such a system would operate to prevent the crane from operating unless the outriggers were firmly extended on terrain. Mr. Friend bases his proposed interlock system on that used on a line lift bucket truck manufactured by Asplundh in 1978.

Second, Mr. Friend opines that the crane should have included a specific warning to operators about the possibility that the crane might tip over with the outriggers in the up position while rotating the boom with no load on it. Id. at 8-9. Mr. Friend has not drafted a proposed warning or indicated that an existing warning was defective; he merely opines that Manitowoc failed to include this specific type of warning.

### **3. Daubert and Rule 702**

The admissibility of expert testimony is governed by Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 469 (1993), subsequent case law,

and Rule 702 of the Federal Rules of Evidence. Daubert requires trial courts to “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” 509 U.S. at 589. Trial courts perform a “basic gatekeeping function” when evaluating all expert evidence, including testimony from engineers. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 148-49, 119 S. Ct. 1167, 143 L. Ed. 2d 238 (1999) (holding that Daubert’s general principles apply to the expert matters described in Rule 702, including “scientific,” “technical,” and “other specialized knowledge,” and specifically applying Daubert to engineering testimony). When expert “testimony’s factual basis, data, principles, methods, or their application are called sufficiently into question . . . the trial judge must determine whether the testimony has ‘a reliable basis in the knowledge and experience of [the relevant] discipline.’” Kumho at 149 (quoting Daubert at 592).

The purpose of the gatekeeping requirement is to ensure not only reliability and relevance, but also to guarantee that an expert “employs in the courtroom the same level of intellectual rigor that characterize the practice of an expert in the relevant field.” Daubert at 589. The party proffering expert testimony has the burden of demonstrating by a “preponderance of proof” that the expert whose testimony is being offered is qualified and will testify to scientific knowledge that will assist the trier of fact in understanding and disposing of issues relevant to the case.” Pride v. BIC Corp., 218 F.3d 566, 578 (6th Cir. 2000). When evaluating expert testimony, the trial court must engage in a two-part analysis focusing on both relevance and reliability. See, e.g., Asad v. Continental Airlines, Inc., 314 F.Supp.2d 726, 731 (N.D. Ohio 2004).

First, the proposed expert testimony must be relevant to the task at hand and there should exist a proper “fit” between the inquiry in the case and the testimony. See, e.g., Asad at 732. The fit requirement directs the Court to look beyond the qualifications of a witness in the abstract, and

focus on whether those qualifications provide a foundation for a witness to answer a specific question. See Berry v. City of Detroit, 25 F.3d 1342, 1351 (6th Cir. 1994). The relevancy requirement stems from the mandate of Rule 702 that the testimony should “assist the trier of fact to understand the evidence or to determine a fact in issue.” Daubert at 591.

The Supreme Court in Daubert identified four non-exclusive factors that may be helpful in assessing the reliability of expert testimony. The Daubert factors include: (1) whether a theory can and has been tested, (2) whether the theory or technique has been subjected to peer review and publication, (3) the known or potential rate of error and the existence and maintenance of standards controlling the technique’s operation, and (4) the extent to which a known technique or theory has gained general acceptance within a relevant scientific community. Id. at 593-94. The inquiry is intended to be a flexible one. Id. at 594.

The Sixth Circuit has recognized an additional factor that may be considered in the context of the reliability inquiry:

whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of the litigation, or whether they have developed their opinions expressly for purposes of testifying because the former provides important, objective proof that the research comports with the dictates of good science.

Smelser v. Norfolk S. Ry. Co., 105 F.3d 299, 303 (6th Cir. 1997). Trial courts enjoy broad latitude both in deciding how to determine liability and in their ultimate determinations of reliability. Kuhmo at 141-42.

## **ANALYSIS**

The plaintiff's expert offers two opinions in this case. The first opinion concerns the alleged design defect of the Manitowoc crane, and the second relates to the alleged failure to provide an adequate warning. Because the design defect inquiry is significantly more involved, and because similar analyses apply to both proffered opinions, the design defect issue is addressed first in full, followed by a briefer disposition of the warning issue.

### **1. Relevance**

Daubert mandates that trial courts "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Daubert at 589. Here, the opinion testimony in question is offered by a mechanical engineer seeking to establish a design defect. The expert is of the opinion that the design of the subject boom truck crane was defective and that the defect caused the accident which resulted in the injuries that are the subject of the present lawsuit. Because the proposed testimony is clearly relevant under the relatively lenient Rule 702 standard, the Court finds that the testimony is relevant and thus the focus is on whether the proffered opinions are also reliable.

### **2. Reliability**

In considering the reliability of the proposed opinions of the plaintiff's expert, the Court must consider the Daubert factors, outlined above, plus the additional consideration of whether the expert's opinions were prepared in anticipation of litigation. Applying the factors flexibly to the case at hand, the relevant factors are: (1) whether the opinions of the plaintiff's expert, Gary Friend, have been tested, (2) whether the opinions have been subjected to peer review or publication, (3) the

extent to which Mr. Friend's theory has gained general acceptance within the engineering/manufacturing community, and (4) the extent to which Mr. Friend's opinions were prepared in the context of litigation.

**a. Testing**

Both parties provide extensive argument and citation with respect to the issue of testing. It is undisputed that there is no single criterion for determining reliability. See, e.g., Pride at 579. However, the issue of testing is important, especially in the context of a theory involving a proposed alternative design. See, e.g., Bouelle v. Crown Equipment Corp., 220 F.3d 532 (7th Cir. 2000) ("testing is important in alternative design cases" and expert testimony excluded based in part on the expert's failure to test).

In this case, the plaintiff's expert offers the theory that the Manitowoc boom truck crane was defectively designed because it did not include a boom-outrigger interlock system. Mr. Friend believes that this system could be incorporated into the crane's existing electrical and hydraulic systems. (Friend Amended Narrative Report p. 9, Docket Entry No. 112 at 9 and Exhibit 12, Docket Entry No. 92-18) Several times during his deposition, Mr. Friend candidly admits that he has never implemented or tested his design concept. (Friend Depo. p. 65, 145-47, Docket Entry Nos. 111-4 at 17 and 111-5 at 17) Mr. Friend relies on a similar interlock system on a 1978 Asplundh truck as a basis for his proposed alternative design. (Friend Depo. p. 138-44 and Exhibit 12) Mr. Friend admits that he has never inspected or operated the 1978 Asplundh truck. (Friend Depo. p. 185) The Asplundh truck was not a crane, and was designed and manufactured to perform a markedly different function from Manitowoc's boom truck crane. The Asplundh truck was designed and

manufactured to lift one or two people relatively straight up in the air to trim tree limbs, or work on electrical wires or similar tasks, while the Manitowoc crane is a heavy-duty piece of mobile construction equipment designed to lift and swing tens of tons of materials.

As illustration for his proposed alternative design, Mr. Friend provided a schematic drawing at his deposition. The schematic drawing purports to show how the Asplundh interlock system could be linked to the hydraulic and electrical systems of the Manitowoc crane. (Exhibit 12) Mr. Friend did not include the schematic drawing with his expert report. He prepared it after generating his report and did not disclose it until his deposition.<sup>7</sup> The schematic consists of a twelve inch by eighteen inch line drawing depicting side-by-side representations of the Asplundh line lift bucket truck interlock system and the Manitowoc electric and hydraulic schematics for the front two outriggers. Mr. Friend added electrical and hydraulic linkages purporting to connect the Asplundh interlock system to the Manitowoc electrical and hydraulic systems. (Friend Depo. p. 138-44) Mr. Friend has never designed an interlock system for manufacture, or talked with any manufacturer about such a system. Id. at 210. Mr. Friend repeatedly refers to his proposed alternative design as a “concept” or “one concept to [apply the Asplundh interlock to the subject Manitowoc crane].” Id. at 138. Mr. Friend admits that he would “certainly” want to test his interlock system. Id. at 145-46.

The plaintiff argues that testing is not required because Mr. Friend’s proposed alternative design is already in the marketplace. (Plaintiff’s Memorandum p. 11, Docket Entry No. 108 at 11) The plaintiff relies on the existence of interlock systems on other construction equipment and

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<sup>7</sup>The plaintiff contends that it was not necessary for Mr. Friend to disclose his schematic drawing as part of his expert disclosures, viewing his drawing as a “trial exhibit.” Although the plaintiff improperly describes this drawing as simply a “trial exhibit,” this issue forms the basis, in part, of the defendant’s Motion to Strike. (Docket Entry No. 125) For the purposes of ruling on the Defendant’s Motion for Summary Judgment, the Court has considered Mr. Friend’s schematic.

devices to show the feasibility of the outrigger interlock system. However, the existence of interlock systems is not at issue in the consideration of this prong of the Daubert factors. The relevant question is whether Mr. Friend's proposed opinion that the Manitowoc boom truck crane was defectively designed because it lacked such a system is sufficiently reliable that it should be admitted in this case. The plaintiff has presented evidence of other devices with interlock systems, and even other boom truck cranes that are apparently now being manufactured with interlock systems. However, this evidence, even if admissible and proved to be true, does not alter the fact that Mr. Friend did not engage in any testing of his theory.

In sum, it is clear to the Court that Mr. Friend failed to test his proposed alternative design, and thus failed to meet the first Daubert factor. Though this factor alone is not determinative, it does raise serious concerns with respect to the reliability of Mr. Friend's proposed opinions. See also Mohney v. USA Hockey, Inc., 138 Fed. Appx. 804 (6th Cir. 2005) (upholding district court's decision to exclude expert testimony of mechanical engineer when expert failed to support his opinion with any objective testing or analysis).

Recently, two federal district courts in Missouri conducted similar inquiries with respect to proposed expert opinions of Mr. Friend. In one case, Mr. Friend's testimony was excluded based in part upon the expert's failure to conduct testing, and in the other, Mr. Friend's opinions were allowed. In Hilton v. Horcher, Case No. 03-6084-CV-SJ-GAF (W.D. Mo., Dec. 13, 2004), Mr. Friend offered to testify that a medical patient lift was defectively designed because it lacked a backup to the primary upstop switch. Id. at 5. The Hilton court found that "Mr. Friend has not engaged in even the most basic testing" and concluded that Mr. Friend's testimony failed to meet the first Daubert factor. The Hilton court went on to find that Mr. Friend's testimony met none of

the other Daubert factors, and granted the defendant's motion to exclude the testimony of Mr. Friend.<sup>8</sup>

Mr. Friend's opinions in another case in the same district were ultimately admitted. Rackers v. John Deere Constr. & Forestry Co., Case No. 02-4189-CV-C-NKL (W.D. Mo., Oct. 10, 2003). In Rackers, Mr. Friend opined that the position of an emergency brake was defectively designed, relying on basic measurements of the length of a human's lower leg. Id. at 7. The Court noted that "there is almost a common sense basis for this opinion" and found it sufficiently relevant and reliable to be admissible. Id. at 8. Mr. Friend also opined that a head rest or high backed seat would have minimized operator backlash in cases of a sudden rear stop. The Rackers court similarly allowed this opinion, which is likewise based on general principles, and almost a matter of basic common sense.

Rackers is easily distinguished from Hilton. In Rackers, the proposed alternative designs were simple and based on every day common sense. In Hilton, as in this case, the proposed alternative designs are mechanical and technical in nature. In fact, the proposed alternative design in the present case is considerably more complex than the one in Hilton. In both cases, testing the proposed alternative design not only makes sense, but also is nearly indispensable to providing the requisite indicia of reliability of the proffered expert testimony. If an expert seeks to opine that a product is unreasonably dangerous because it should have been designed differently, that expert should provide some indication that the proposed design would at least be functional.

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<sup>8</sup>The Court in Hilton also excluded Mr. Friend's testimony with respect to his proposed warning and testimony relating to the nature and circumstances of the plaintiff's fall. Id. at 11 and 12.



**b. Peer Review and Publication**

The second Daubert factor is whether the proposed theory has been subjected to peer review and publication. Mr. Friend cannot identify any other expert opinions or published literature supporting his opinion that mobile boom truck cranes are defective if they lack an interlock system. (Friend Depo. p. 103) The plaintiff argues that Mr. Friend is merely unaware of other writings, and that this fact does not mean that such writings do not exist. (Plaintiff's Response to Defendant's Statement of Undisputed Facts p. 4, Docket Entry No. 109 at 4) Such writings may, in fact, exist. However, neither the plaintiff nor Mr. Friend have cited to any instances of peer review, publications, or even conversations with others in the industry relating to Mr. Friend's theory that mobile truck cranes are defective if they lack outrigger interlocks. (Friend Depo. p. 99-100)

The plaintiff attempts to rely on sales brochures showing that interlock systems are used on other boom truck cranes as proof that Mr. Friend's theory has been subject to peer review. (Plaintiff's Memorandum p. 16, Docket Entry No. 108 at 16) Assuming for the sake of this motion that these brochures are admissible, they simply do not provide the kind of peer review contemplated by Daubert. Daubert discusses peer review and publication in the context of submission of theories and propositions to the relevant scientific or technical community through mediums such as peer-reviewed journals. See Daubert at 593. A sales brochure is not a type of publication contemplated under this Daubert factor. Presumably, the plaintiff wishes the Court to infer that because other pieces of equipment use an interlock system (as evidenced by the referenced sales brochures), such systems have been subject to peer review. The Court declines to make such a leap.

The plaintiff's expert admits that he is unaware of any peer review or publication relating to his opinions. The plaintiff has not produced any other evidence of any type of peer review

contemplated by this Daubert factor. In fact, before beginning work on the present case, Mr. Friend himself had never expressed the opinion that a truck crane without an interlock system was defective. (Friend Depo. p. 99-100) Mr. Friend has never submitted his design to any industry organizations, nor has he published anything relating to crane design. Id. at 206. Therefore, Mr. Friend's proposed opinions fail to meet the second Daubert factor.

**c. General Acceptance Within the Relevant Community**

The third Daubert factor considers whether an expert's theories are generally accepted in the pertinent scientific or technical community. Daubert at 594. "Widespread acceptance can be an important factor in ruling particular evidence admissible," and theories with only "minimal support within the community... may be properly viewed with skepticism." Id. (citations omitted). Here, the relevant community is the engineering community, particularly the crane manufacturing community.

Mr. Friend testified that it was "probably correct" that it was not industry practice to use an interlock system on outriggers in 1999, and he did not know of any manufacturer of mobile truck cranes that used interlock systems on outriggers before 2000. (Friend Depo. p. 153-54) However, Mr. Friend discusses several standards published by the American National Standards Institute (ANSI), which are widely recognized (but non-binding) guidelines for the relevant technical community. Mr. Friend points to several different ANSI standards that do discuss including outrigger interlocks on various pieces of equipment. But, Mr. Friend agrees that the standard applicable to the Manitowoc boom truck crane is ANSI 30.5, which does not require or even address outrigger interlocks. Id. at 108. Mr. Friend agrees that the Manitowoc crane complied with ANSI

Standard 30.5. Id. Therefore, any discussion related to whether other standards applied to the subject boom truck crane or whether it failed to comply with other standards is not relevant, and will not be addressed further.<sup>9</sup>

Mr. Friend does identify other crane manufacturers that presently include outrigger interlocks on their boom truck cranes. The other crane manufacturers identified by Mr. Friend as providing interlock systems on its cranes are Altec and QMC. Mr. Friend did not include brochures from these companies with his expert report, but presented them at his deposition after he had served his expert report. In fact, Mr. Friend only became aware of these brochures from the plaintiff's attorney after he had prepared his expert report.

These brochures along with certain other materials are the subject of the defendant's pending Motion to Strike. Although the Court would be inclined to grant the defendant's Motion to Strike, it is not necessary to do so.<sup>10</sup> Even if these documents are admissible, Mr. Friend's expert opinion still fails to meet the gatekeeping standards. Therefore, for the purposes of this opinion, the brochures are considered admissible.

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<sup>9</sup>This includes any claims that the Manitowoc boom truck crane "would have been" covered by other ANSI standards had it been used as boom-supported work platform for personnel, because it was not used in that manner in this case.

<sup>10</sup>Were the Court to rule on this motion, it would properly be termed a motion in limine, rather than a Motion to Strike. Here, the defendant objects to the opinions of an expert expressed at a deposition and in an affidavit. Motions to strike relate only to "pleadings," a term which is narrowly defined by Rule 7(a) of the Federal Rules of Procedure. Statements and exhibits relating to depositions and affidavits are not within the Rule's definition of pleadings. Therefore, a Rule 12(f) Motion to Strike would not apply to the disputed materials in this case. See Fed. R. Civ. P. 12(f) and 7(a). See also Porter v. Hamilton Beach/Proctor Silex, Inc., No. 01-2970-MAV, 2003 WL 21946595 (W.D. Tenn. Jul. 28, 2003) (discussing this issue more fully in the context of a motion to strike an errata sheet and supplementary expert report).

Evidence that other boom truck crane manufacturers currently include an interlock system is not probative with respect to whether the theory that these cranes are defective without such systems was accepted within the relevant community. It should be emphasized that the inquiry is time-specific. Under Tennessee products liability law, the product must be unreasonably dangerous “at the time it left the control of the manufacturer or seller.” Tenn. Code Ann. § 29-28-105(a). The subject crane was manufactured in 1999. The question of what was generally accepted in 1999 may be vastly different than what the current standards may be, especially in an industry where technology and safety standards are constantly evolving. Mr. Friend testified that he does not know when Altec or QMC first began making outrigger interlocks available on its truck cranes, nor does he know of any other manufacturer who had interlocks on their outriggers at the time the Manitowoc crane was manufactured. (Friend Depo. p. 125-26) In fact, Mr. Friend testified that he believed that it was not the industry practice to provide interlocks on boom truck cranes in 1999, the year that the subject Manitowoc crane was manufactured. Id. at 153. Therefore, even assuming that the brochures are admissible, they do not help the plaintiff here.

In sum, there is no evidence that the engineering or manufacturing communities generally accept the theory that boom truck cranes are defective if they lack an interlock system like the one proposed by Mr. Friend, and Mr. Friend himself testified that interlock systems were not the industry standard in 1999. Neither the plaintiff nor her expert has produced any such evidence. Therefore, Mr. Friend’s opinions fail to meet the third Daubert factor.

**d. Opinions Developed Solely for Litigation Purposes**

Another important factor in the current analysis is whether the expert is testifying about matters arising naturally and independently of litigation or whether opinions are developed solely for the purpose of testifying. See Smelser v. Norfolk S. Ry. Co., 105 F.3d 299, 303 (6th Cir. 1997) (noting that this factor was added to the traditional analysis by the Ninth Circuit on remand in Daubert, and quoting it with approval); Lake Michigan Contractors, Inc., v. Manitowoc Co., 225 F.Supp.2d 791, 795 (W.D. Mich. 2002) (noting the Sixth Circuit's adoption of this factor in Smelser); Downs v. Perstorp Components, Inc., 126 F. Supp. 2d 1090, 1098 (E.D. Tenn. 1999) (taking into account that expert's opinions developed in connection with litigation and ultimately finding expert testimony inadmissible for this and other reasons). The Sixth Circuit recognizes that consideration of this factor is entirely appropriate, in light of the Supreme Court's exhortations in Kumho for a flexible approach. Close judicial analysis of expert testimony is necessary "because expert witnesses are not necessarily always unbiased scientists." Turpin v. Merrell Dow Pharm., Inc., 959 F.2d 1349, 1352 (6th Cir. 1992). See also Nelson v. Tennessee Gas Pipeline Co., 243 F.3d 244 (6th Cir. 2001) (finding that the magistrate judge did not abuse his discretion in considering that expert testimony was prepared in the context of the litigation and at the behest of plaintiff's counsel, or by concluding that this fact militated against the admissibility of the expert's opinion.)

The plaintiff's expert in this case appears in many ways to be the quintessential expert for hire. Though he is indisputably a mechanical engineer with good qualifications and an impressive resume, he has nonetheless spent the last twenty plus years of his life testifying as an expert in a wide variety of design defect cases. His experience with mobile truck cranes is admitted extremely limited, apparently confined to his design of a rough terrain crane in 1973. (Friend Depo. p. 207)

The 1973 crane did not have an interlock system. Id. at 210. As previously noted, Mr. Friend has conducted no independent studies or testing, nor engaged in any scholarly or technical research and writing in connection with any of the issues involved in this litigation.

In the present case, Mr. Friend was retained by the plaintiff's counsel and instructed "to evaluate the design of the outrigger system of the 1999 Manitowoc truck crane Model M-2592 involved in this incident and determine whether the crane had proper safety equipment and/or protection for the conditions of this accident." (Friend Amended Narrative Report p. 1, Docket Entry No. 112 at 1) Mr. Friend further testifies that his proposed interlock system provides only partial interlocks which cover only the two outriggers on the front of the truck, and not the two in the rear. (Friend Depo. p. 142-43) To interlock both front and rear outriggers, Mr. Friend testified that "you'd have to go a bit further." Id. at 143. Essentially, Mr. Friend's proposed alternative design simply endeavors to prevent the specific accident that caused the present injury.

It is nearly impossible to envision a scenario where such specific "Monday morning quarterbacking" would not reveal some potential solution to almost any problem, or where some creative design element conceived after the fact might fail to prevent a tragic accident. Consideration of the context of an expert's opinion is especially important given the potential for abuse in light of the incredible benefits of hindsight. Here, the expert's opinions were conceived, executed, and invented solely in the context of this litigation. The expert here does not even offer a proposed design that would necessarily make this crane safer; he merely offers a mechanism that might have prevented a very specific accident that occurred under very specific conditions. Mr. Friend's opinions were prepared exclusively in preparation for litigation, and this factor weighs in favor of exclusion.

### **3. Conclusions on Relevance and Reliability**

In conclusion, despite the fact that the proposed opinions of Gary Friend may appear to be initially relevant, based on the above analysis, they fail to meet any of the reliability factors considered by the Court. Mr. Friend has not tested his theories. There is absolutely no evidence of any type of peer review or publication. Evidence of general acceptance of Mr. Friend's theories within the engineering community is notably absent. Finally, Mr. Friend's opinions were prepared entirely in preparation for this litigation, and therefore lack any indicia of reliability they may have otherwise possessed by virtue of arising naturally and independently. The Court therefore finds that these opinions are unreliable and thus inadmissible.

### **4. Plaintiff's Proof Without Expert Testimony**

The plaintiff argues that the testimony of the defendant's expert David Moravec also supports her claim. (Plaintiff's Memorandum p. 1, 3, 16, Docket Entry No. 108 at 1, 3, 16) In fact, the plaintiff maintains that her case could go forward on the basis of Mr. Moravec's testimony alone. Id. at 19, 21. The defendant argues that Mr. Moravec's testimony is inadequate to support the plaintiff's claims. (Defendant's Reply, Docket Entry No. 123 at 11)

Mr. Moravec is a former employee of Manitowoc and an experienced engineer with years of experience in the field of crane design. (Moravec Depo. p. 13-14, Docket Entry No. 105 at 9-10) Mr. Moravec testified that Manitowoc considered incorporating an interlock system but had not done so due to various concerns involving safety, utility, and feasibility. Id. at 43-44, 75-79. Mr. Moravec testified that if there were an interlock system that addressed those concerns, that it would be a "good thing" to put on the Manitowoc crane. Id. at 78.

As previously discussed, the burden is on the plaintiff to produce expert testimony in this design defect case. The plaintiff's expert must offer competent and admissible testimony establishing that the subject boom truck crane was defective or unreasonably dangerous. Mr. Moravec's testimony fails to establish either defect or dangerousness. Mr. Moravec candidly admitted that his company wanted to design the best and safest possible cranes. Id. at 79-80. Interlock systems were considered as a possible safety device, but were rejected for a variety of plausible reasons. Mr. Moravec's testimony does not provide evidence that the boom truck crane was defective or unreasonably dangerous because it lacked an interlock system. In fact, another reasonable interpretation of Mr. Moravec's statement is that to the best of his knowledge as a crane design professional, a safe, feasible interlock system compatible with the Manitowoc crane did not exist. The plaintiff cannot rely on contrived snippets of the defendant's expert's testimony to mask her failure to produce a competent expert of her own. This case cannot go forward on the basis of the expert testimony of Mr. Moravec.

## **5. Conclusions on Admissibility of the Proposed Warning Testimony**

The same relevance and reliability inquiry applicable to the design defect opinions govern the admissibility of the warning testimony. It is clear that Mr. Friend has no specific education on warnings, no specific training on warnings, has never done any testing of proposed warnings, and no warnings that he drafted have ever been actually used on equipment in the field. (Friend Depo. p. 116-18) He has not drafted a proposed warning in this case. Id. at 119. Mr. Friend further testified that even if a warning had been drafted, he cannot say to a reasonable degree of certainty whether that warning would have made a difference in this case. Id. at 177. At oral argument, the



plaintiff's counsel frankly conceded that the plaintiff was "on very shaky ground" with respect to the warning issue.

Without engaging in potentially repetitive discussion of the factors addressed above, the Court finds that there is ample evidence from which to conclude that Mr. Friend's opinions on the warning issue should not be allowed. See Patterson v. Central Mills, Inc., 64 Fed. Appx. 457 (6th Cir. 2003) (finding that proposed opinion evidence on warnings did not meet Daubert relevance and reliability standards when expert had no specific education, training, no peer reviewed publications, and only limited experience with warnings); Hilton v. Horcher, Case No. 03-6084-CV-SJ-GAF at 11 (W.D. Mo., Dec. 13, 2004) (holding that Mr. Friend's testimony regarding the adequacy of a warning in a products liability case was inadmissible "considering his lack of qualifications with regard to warnings").

### **CONCLUSION**

The plaintiff has failed to offer admissible expert testimony. This claim is governed by Tennessee products liability law, which requires expert testimony. The plaintiff has failed to make a sufficient showing of an essential element of the case with respect to which she has the burden. An appropriate order will enter.

  
JULIET GRIFFIN  
United States Magistrate Judge